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| APPLICATION NO.           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------|-------------|----------------------|---------------------|------------------|
| 10/671,142                | 09/25/2003  | Roger Graham Byford  | VOCO / 08           | 4551             |
| 26875                     | 7590        | 10/17/2007           | EXAMINER            |                  |
| WOOD, HERRON & EVANS, LLP |             |                      | ARMSTRONG, ANGELA A |                  |
| 2700 CAREW TOWER          |             |                      |                     |                  |
| 441 VINE STREET           |             |                      | ART UNIT            | PAPER NUMBER     |
| CINCINNATI, OH 45202      |             |                      | 2626                |                  |
|                           |             |                      | MAIL DATE           | DELIVERY MODE    |
|                           |             |                      | 10/17/2007          | PAPER            |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                        |                      |  |
|------------------------------|------------------------|----------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b>  |  |
|                              | 10/671,142             | BYFORD, ROGER GRAHAM |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>      |  |
|                              | Angela A. Armstrong    | 2626                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 August 2007.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4-9,11,12,14,17-22,24-27,29,31-34,36,37,40-44,47-55 and 57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1, 4-9, 11-12, 14, 17-22, 24-27, 29, 31-34, 36-37, 40-44, 47-55, and 57 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

**DETAILED ACTION**

***Response to Amendment***

1. This Office Action is in response to the amendment filed August 9, 2007, canceling claims 2-3, 10, 13, 15-16, 23, 28, 30, 35, 38-39, 45-46, 56, and 58-60 and amending claims 1, 7-9, 12, 14, 18-22, 25-27, 29-32, 34, 39-37, 40-42, 4,48-49, 52, 53, 55, and 57. Currently, claims 1, 4-9, 11-12, 14, 17-22, 24-27, 29, 31-34, 36-37, 40-44, 47-55, and 57 are pending.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 7, 9, 12, 18, 20, 25, 27, 29, 37, and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 7, 9, 12, 18, 20, 25, 27, 29, 37, and 49 recite the limitation "a baseline" after a recitation of "a baseline" in claim(s) from which they depend. Thus, as written, it is unclear if applicant is referring to the previously cited baseline or if applicant intends to claim or make reference to a new and/or different baseline.

***Claim Rejections - 35 USC § 102***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 4-9, 11-12, 14, 17-22, 24-27, 29, 31-34, 36-37, 40-44, 47-55, and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Burnett et al (US Patent Application Publication 2003/0228023 A1).

7. Regarding claim 1, Burnett discloses an apparatus for detecting user speech (Abstract) comprising: a first microphone (19) and at least a second microphone (13) each operable to generate audio signals in response to sounds (paragraphs 39 and 46); the first microphone operable to capture a greater proportion of speech sounds from a user than the second microphone (paragraphs 39 and 46); processing circuitry operable to process the audio signals and to compare characteristics of the audio signals to a baseline (paragraphs 43, 51-52, 87-136, 142-162; element 106); speech recognition circuitry for further processing the audio signals and recognizing user speech in the audio signals (paragraphs 40, 43, 54-56); the processing circuitry configured for selectively forwarding the audio signals from the first microphone to the speech recognition circuitry only when the audio signals vary from the baseline more than a threshold amount, thus indicating that the user is speaking (paragraphs 43, 51-52, 87-136, 142-136).

Regarding claim 4, Burnett discloses the first microphone is located relative to the second microphone to capture a greater proportion of speech sounds of a user (paragraphs 54-86).

Regarding claim 5, Burnett discloses a headset (paragraphs 49,50) to be worn by a user and housing the first and second microphones (paragraphs 163,165).

Regarding claim 6, Burnett discloses the first microphone is positioned in the headset to be closer to a mouth of the user than the second microphone when the headset is worn (paragraphs 54-86).

Regarding claim 7, Burnett discloses the processing circuitry processes signal levels of the audio signals to compare to a baseline (paragraphs 43, 51, 88; element 106).

Regarding claim 8, Burnett discloses the signal characteristics include at least one of energy level characteristics, frequency characteristics, amplitude characteristics and phase characteristics (paragraphs 39, 43, 54-86).

Regarding claim 9, Burnett discloses processing circuitry operable for initially determining a variation between signal characteristics of the audio signals when the user is not speaking and then using that variation as a baseline (paragraphs 43, 51, 88; element 106).

Regarding claim 11, Burnett discloses the second microphone is an omni directional microphone (paragraphs 43, 51, 88).

Regarding claim 12, Burnett discloses Mel scale filters, the processing circuitry operable to use outputs of the Mel scale filters for comparing the audio signals to a baseline (paragraphs 39, 43, 51, 88).

Regarding claims 14, 17-22, 24-27, 29, 31-34, 36-37, 40-44, 47-55, and 57; claims 14, 17-22, 24-27, 29, 31-34, 36-37, 40-44, 47-55, and 57 are similar in scope and content to claims 1, 4-9, 11-12, and are rejected under similar rationale.

***Response to Arguments***

8. Applicant's arguments filed August 9, 2007, have been fully considered but they are not persuasive. Applicant argues the reference to Burnett does not teach or suggest processing circuitry that selectively forwards audio signals to speech recognition circuitry only when a determination is made that the user is speaking. The Examiner respectfully disagrees. The Burnett reference provides adequate support for the limitation as via the implementation of a VAD (by reference to co-pending application number 10/383,162 and at paragraphs 87-136 and 142-162), since it is well known that the primary function of a voice activity detector is to provide an indication of speech presence in order to facilitate additional and/or further speech processing. The VAD functions to extract some measured features, quantities or characteristics from a received input signal and to compare the extracted signal eatures/quantities/characteristics values with certain selected thresholds. The voice-active decision is made if the measured values exceed the thresholds, and thus a signal which is determined to be voice/speech is “selectively forwarded” for further speech processing and a signal which is determined to be a non-speech signal is not “forwarded” and additional speech processing is not initiated.

***Conclusion***

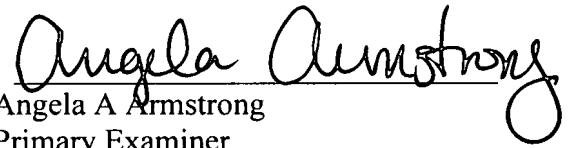
9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Angela A Armstrong  
Primary Examiner  
Art Unit 2626

AAA  
October 13, 2007